

This attractive shell is much like a reversed *P. (Antiplanes) santarosana* Dall, in color and sculpture, but the whorls are more oblique besides being reversed, and the spire is even more slender than in Dall's species. *P. (Antiplanes) catalinae* was found associated with *P. (Antiplanes) perversa* Gabb, which is also sinistral. The latter species is wider, has less rounded whorls and the color is a darker brown with a light, spiral band, as stated by Gabb in his original description. The two species are readily separated.

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#### DESCRIPTIONS OF NEW JAPANESE LAND SHELLS.

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BY H. A. PILSBRY AND Y. HIRASE.

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*Eulota (Plectotropis) pannosa* var. *awashimana* n. var.

This race is similar to *E. pannosa* in color, texture, sculpture and the profuse peripheral fringe, but differs in being much smaller, proportionally higher, with decidedly narrower umbilicus, which is not enlarged at the opening, the base being almost angular around it. Whorls  $5\frac{1}{2}$ , the last very shortly and slightly deflexed in front. It is more robust and less depressed than *E. deflexa*. Alt. 8, diam. 13 mm.

Awashima, Echigo. Types no. 86495, A. N. S. P., from no. 1164 of Mr. Hirase's collection.

Two species of *Plectotropis* have been described by A. Adams from Awashima: *H. setocincta* and *H. scabricula*. The first measures about 12x6 mm., the altitude half the diameter, being therefore more depressed than *awashimana*, in which the alt. is nearly two-thirds the diam. *H. scabricula* is about 9x6 mm., with  $6\frac{1}{2}$  whorls, the last "subangulate" peripherally. This species is therefore smaller than *awashimana*, with more whorls and blunter ambitus.

*Helix conella* A. Ad., 1868, from "Tabu-Sima" (not *H. conella* Pfr., 1861), is probably a synonym of *Plectotropis deflexa* Pfr., from the same island.

*Eulota (Plectotropis) shikokuensis subdivesta* n. subsp.

Shell more depressed than *E. shikokuensis*, and smoother, the oblong granules bearing no cuticular scales, the periphery without a fringe. Whorls nearly 6, the last very shortly and abruptly de-

flexed in front. Umbilicus more broadly open. Alt. 7, diam. 16 mm., umbilicus 5 mm. wide.

Sodayama, Tosa. Types no. 84783, A. N. S. P., from no. 1022 of Mr. Hirase's collection.

*E. s.* var. *hadaka* (NAUTILUS xvii, 105) is a much less depressed form, measuring, alt. 9.5, diam. 16, umbilicus 4 mm. wide, and alt. 8, diam. 14 mm.

*Eulota (Aegista) eminens* n. sp.

Shell broadly and deeply umbilicate, low-trochiform, dull yellowish-brown, finely striate, the last striæ on the last whorl broken into low granules, which when quite unworn bear short cuticular laminae in places. Spire convex-conic. Whorls  $6\frac{3}{4}$  to 7, slightly convex, closely coiled, and very slowly widening, the last whorl obtusely subangular at the periphery, and descending a little in front, very convex beneath. Aperture very oblique, rounded, about one-fourth of the circle excised at the parietal wall. Peristome thin, narrowly expanded, reflexed below. Alt. 7.3, diam. 10.8, width of umbilicus 3 mm.

Toba, Shima. Type no. 86493 A. N. S. P., from no. 590a of Mr. Hirase's collection.

This species belongs to the group of *Aegista mimula*, but differs from all the known species by its elevated spire, higher than in any other Japanese *Aegista*, and approaching the contour of the species referred to the section *Caelorus*.

*Eulota (Aegista) mimula* var. *goniosoma* n. var.

This race resembles *mimula*, *trachyderma* and *mikuriyensis* in the rather small aperture with thin, expanded lip, subreflexed below, but not thickened within. The spire is low conoid-convex, the periphery strongly angular and the base convex, abruptly curving into the wide umbilicus. The lusterless surface is brownish-yellow, freckled with buff dots, finely, rather irregularly striate, and in some specimens retaining short, triangular cuticular laminae below the periphery. Whorls  $5\frac{1}{2}$  to  $5\frac{3}{4}$ . Alt. 6.5, diam. 11.3 to 12 mm., width of umbilicus 4 mm.

Amagisan, Izu. Types no. 86462 A. N. S. P., from no. 1165 of Mr. Hirase's collection.

On account of its strongly angular periphery, this might be con-

sidered a distinct species, and it may prove to be so ; but it belongs to a group of forms which may for the present be ranked as subspecies of *E. mimula*, and including the following :

*E. mimula* Pils.

*E. mimula trachyderma* Pils. & Gude. (*E. aperta trachyderma*, Proc. A. N. S., 1901, 614).

*E. mimula mikuriyensis* Pils. (*E. aperta mikuriyensis*, Naut., xvi, 45).

*E. mimula goniosoma* Pils. & Hir.

*Punctum elachistum* n. sp.

Shell umbilicate, depressed, brown, the first whorl whitish. Whorls  $2\frac{3}{4}$ , the last one sculptured with rather widely spaced lamellæ and close spiral striæ in the intervals, the spire nearly smooth. The whorls enlarge rapidly, and the last one is somewhat compressed below the periphery, which is rounded. The aperture is large, oblique and rounded, about one-fourth of the circle excised by the preceding whorls. Alt. 7, diam. 1.2 mm.

Yanagawa, Chikugo. Types no. 86492 A. N. S. P., from no 1159 of Mr. Hirase's collection.

There are fewer whorls than in *P. leptum*, which is also a little larger, and judging from the figures, more densely lamellose.

*Punctum apertum* n. sp.

Shell broadly umbilicate, depressed, thin, brownish-corneous, sculptured with delicate, thread-like riblets, in large part cuticular. Whorls 3, convex, parted by an impressed suture. Aperture oblique, rounded, slightly more than one-fourth of the circle excised by the preceding whorl ; peristome thin and simple. Alt. 7, diam. 2mm.

Nemuro, Nemuro. Types no. 86490 A. N. S. P., from no. 1156 of Mr. Hirase's collection.

This little snail from the northeastern province of Yesso, is distinguished by its depressed form and wide, shallow umbilicus.

*Zonitoides chishimanus* n. sp.

Shell openly umbilicate, whitish-corneous, thin ; closely and delicately rib-striate, densely and finely striate spirally between the lamellæ. Spire convex. Whorls nearly  $3\frac{1}{2}$ , convex, slowly increasing, the last rounded peripherally and below. Aperture quite ob-

lique, wide-lunate, the peristome simple and thin. Alt. .7, diam. 1.1 mm.

Kunashiri, Chisohima chain (Kuril Is.). Types no. 86491 A. N. S. P., from no. 1155 of Mr. Hirase's collection.

This very small, whitish species is more closely sculptured than any Japanese *Punctum*, unless *P. leptum* Westerl. be an exception. That species from Nagasaki is larger and has a much narrower umbilicus.

*Macrochlamys chaunax* n. sp.

Shell perforate, convex-conic above, more convex below the slightly obtusely angular periphery, the angle above the middle; thin, somewhat transparent, pale yellow. Surface brilliantly glossy, showing some slight growth-wrinkles and densely-crowded, very minute spiral striae. Whorls 4, moderately convex, the last about double the width of the preceding, subangular, the angle becoming obsolete at the aperture. Aperture rather large, rounded-lunate. Peristome simple and thin, reflexed at the columellar insertion. Alt. 2.7, diam. 4.5 mm.

Imotoshima, an islet south of the Habajima, Ogasawara. Types no. 83030 A. N. S. P., from no. 899 of Mr. Hirase's collection. Also found on Hahajima.

*Macrochlamys cerasina shinanoensis* n. subsp.

Shell resembling *M. cerasina* and *M. gudei*, but much larger than the former, more globose and more glossy than the latter. There are  $6\frac{1}{2}$  convex, very slowly widening whorls, the last one angular at the periphery in front, becoming rounded on the latter part. Spire low conic, with nearly straight outlines. Base strongly convex, impressed around the narrow axial perforation, which is nearly concealed by the triangular dilation of the columellar lip. Alt. 10.4, diam. 7.4 mm.

Enasan, Shinano. Types no. 86483 A. N. S. P., from no. 1173 of Mr. Hirase's collection.

*Tornatellina monodonta* n. sp.

Shell imperforate, ovate-conic, thin, pale yellowish corneous, imperfectly transparent, almost smooth. Spire straightly conic, the apex obtuse. Whorls  $4\frac{3}{4}$ , moderately convex, the last somewhat swollen. Aperture oblique, ovate, somewhat less than half the total length. Outer lip thin and simple, columella strongly twisted, form-

ing a white spiral fold. No parietal lamella. Length 3, diam. 1.9 mm.

Imotojima, Ogasawara. Types no. 86479 A. N. S. P., from no. 1158 of Mr. Hirase's collection.

This form is distinguished at once from others described from Ogasawara-jima and the islands of Izu by the absence of a parietal lamella. It occurs also on Hahajima, no. 1158a of Mr. Hirase's collection.

*Carychium nipponense* n. sp.

Shell oblong, with a rather wide spire and obtuse apex, clear, transparent corneous, smooth and glossy. Whorls 4, convex, the suture well impressed. Aperture oblong, oblique, with a single, small, acute lamella at the middle of the inner margin, and a larger tubercle opposite to it within the outer lip, which is thickened throughout. Length 1.3, diam. .6 mm.

Sendai, Rikuzen. Types no. 86441 A. N. S. P., from no. 1157a of Mr. Hirase's collection.

A dwarf among pygmies. It is like *C. hachijoense* in its polished surface, but differs in the wide spire, not tapering regularly as in that insular form. *C. noduliferum*, *pessimum* and *borealis* are all conspicuously striate. *C. noduliferum* and *C. nipponense* are the only species at present known from the main island of Japan. Specimens sent from Uji-Yamada, Ise, indicate that *C. nipponense* has a wide range along the ocean coast of Nippon.

*Alycæus oshimanus* n. sp.

Shell of the depressed low-conoid shape of other Japanese species, the umbilicus oblong, the last whorl deviating tangentially about half-way across the preceding. Whorls  $3\frac{3}{4}$ , the first two smooth, reddish or yellowish, the following whorl rib-striate, at first finely and closely, but on the first half of the last whorl the riblets become quite widely spaced. Last half of the last whorl swollen, and very much more finely and closely sculptured than any other part of the shell; the neck rather strongly contracted, then swollen and sculptured again. Aperture very oblique, circular, the lip strengthened by an external rib, built forward beyond the rib, the upper and lower margins arched forward a little. Alt. 2, diam. 4 mm. Operculum thin, yellow.

Oshima, Osumi. Types no. 83385 A. N. S. P., from no. 931 of Mr. Hirase's collection.

This species differs from the allied *A. vinctus* in its sculptured neck and less developed "collar" or lip-rib. No land shell of the important island of Oshima is known to be identical with species of Kyushu or of the main island of Japan.

*Stenothyra formosana* n. sp.

Shell small, ovate, smooth and glossy, yellowish olivaceous. Spire convex-conic, about 4 whorls remaining, the earlier ones being eroded. Last whorl moderately inflated, distinctly compressed from back to face, strongly contracting to the aperture, which is subvertical, ovate, and not much exceeding one-third the length of the shell. Length 3.9, diam. 2.2 mm.

Kironten, Formosa. Types no. 86485 A. N. S. P., from no. 159 of Mr. Hirase's collection.

This small, plain species is related to a form in the collection of the Academy labelled *S. glabra* A. Ad., but is very much larger, and not quite so much contracted at the aperture. *S. glabra* was not very fully defined by Adams. It was described from Peiho, but has been reported from Formosa by Nevill, Handlist Ind. Mus., p. 43.

*Melania hahajimana* n. sp.

Shell rather thin and light, yellowish olive, usually with some indistinct reddish longitudinal streaks on the spire; somewhat glossy, sculptured with irregular, unequal but fine spiral grooves and striæ, which on the spire cut the longitudinal growth-wrinkles into oblong beads, irregularly and unevenly developed. The spire is slender with slightly concave outlines. Apex eroded, 6 or 7 remaining whorls but slightly convex, separated by an impressed, oblique suture. Last whorl inflated in the middle. Aperture ovate, oblique, broadly rounded below, the thin lip slightly sinuous.

Length 34, diam. 10.5, length of aperture 10.5 mm.

Length 30, diam. 10, length of aperture 10.8 mm.

Hahajima, Ogasawara. Types no. 8645 A. N. S. P., from no. 172 of Mr. Hirase's collection.

The slender spire, thin texture and inflated last whorl widely separate this form from *M. boninensis* of Chichijima, the only Melanian hitherto known from the Ogasawara-jima. It is related to *M.*

*tuberculata* (Müll.), a widely distributed Oriental form, much more strongly sculptured, with more convex whorls.

*M. boninensis* Lea has been found to grow much larger than the original examples, reaching a length of 32.5 mm.

*Melania libertina* var. *gigas* n. v.

Very large, finely striate spirally, more coarsely so at the base, but without longitudinal folds. Olivaceous-brown, yellow in places, with some darker-brown streaks; the color concealed by a black ferrous coat. Length of decollate shells with about 4 to  $4\frac{1}{2}$  whorls remaining, 48 to 51, diam. 20 mm., length of aperture 21 to 22 mm.

Arato, Echizen. Types no. 86441 A. N. S. P., from no. 171 of Mr. Hirase's collection.

This is the largest Japanese Melanian now on record. Some specimens of *M. löbbeckiana* are longer, but they are not so stout in figure.

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#### A SINGULAR EOCENE TURBINELLA.

BY WILLIAM HEALEY DALL.

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A singular *Turbinella* has recently been received from Mr. S. W. McCallie, of Georgia, which seems to stand, to some extent, between the two well known types, *Turbinella* proper and *Vasum*.

*Psilocochlis* subg. nov.

Shell thick and heavy, with depressed dome-like spire and few whorls, a strong siphonal fasciole surrounding a wide umbilical funnel, which is completely filled by a heavy deposit of callus, which also extends to the posterior angle of the aperture; the pillar exhibits three strong elevated plaits, and the surface is smooth or free from ribs, nodules, or prominent sculpture of any kind. Type:

*Turbinella* (*Psilocochlis*) *McCallie* sp. nov.

Shell short and broad, with about four whorls, of which all but the last are very small; apex hardly rising above the last whorl, which is dome-shaped above and widest at about the level of the posterior angle of the aperture, diminishing forward and slightly constricted behind the strong and flaring siphonal fasciole; umbilical funnel smooth, but nearly filled with a smooth appressed mass of callus, con-